

### Amendments to the Claims

This listing of claims will replace all previous versions and listings of the claims.

### Listing of Claims:

1. (Currently amended) A device comprising:  
an actuator configured ~~able~~ to support a transducer head adjacent to a ~~rotatable disc~~; and  
a position detector ~~constructed and arranged~~ configured to determine a head's former  
stationary position ~~relative to the disc of the transducer~~ based on a latter motion  
pattern of the actuator obtained from application of a current profile of controlled  
variable magnitude to the actuator.
2. (Currently amended) The device of claim 1 in which the actuator comprises a voice  
coil to which the current profile is applied. ~~position detector essentially consists of:~~  
~~a first portion being a voice coil; and~~  
~~a second portion operatively coupled to the voice coil and rigidly mounted to a controller~~  
~~board.~~
3. (Original) The device of claim 1 further comprising a latch configured to urge the  
actuator toward a predetermined position.
4. (Original) The device of claim 1 further comprising at least one crash stop configured  
to limit a range of motion of the actuator.

5. (Currently amended) The device of claim 1 in which the head's former stationary position comprises a position adjacent a data storage area of a storage disc. ~~consists of one Boolean value.~~

6. (Currently amended) The device of claim 1 in which the position detector comprises ~~includes~~ a processor configured to receive ~~several~~ voltage measurements and to derive the head's former stationary position in relation to ~~partly based on~~ an arithmetic combination of the measurements.

7. (Currently amended) The device of claim 1 in which the position detector comprises ~~includes~~ a programmable processor configured to spin-up a disc, detect the latter motion pattern after said spin-up, and generate a digital indication of a position of the transducer prior to said spin-up in relation to said latter motion pattern. ~~coupled to a memory containing a program that enables the processor to perform steps of:~~

- ~~(a) spinning up the a disc;~~
- ~~(b) detecting the latter motion pattern after the spin-up step (a); and~~
- ~~(c) generating a digital indication of where the head was just before the spin-up step (a) partly based on the latter motion pattern.~~

8. (Currently amended) The device of claim 1 in which the actuator supports a plurality of additional heads adjacent at least one additional disc, the discs being mounted for co-rotation on a disc stack.

9. (Currently amended) The device of claim 1 in which the actuator ~~includes~~ comprises a voice coil configured to provide a voltage to the position detector that includes a back-electromotive force component indicative of a movement of the voice coil across a magnetic field.

10. (Currently amended) The device of claim 9 1 in which the position detector ~~includes~~ comprises an analog-to-digital converter operatively coupled across ~~the~~ a voice coil and configured to sample ~~the~~ a voltage provided by the voice coil.

11. (Currently amended) A method comprising steps of:

(a) spinning up a data storage disc; ~~and~~

applying a drive current profile of predetermined variable magnitude; and

(b) generating a digital indication of a position of a transducer prior to the spinning up

step where a head was just before the spin-up step (a) partly based on a head arm

in relation to an actuator motion pattern detected after the spin-up step (a)

determined in relation to the applying step.

12. (Currently amended) The method of claim 11 in which the spinning up step (a) ~~includes~~ comprises a step ~~(a1)~~ of mounting a disc stack comprising the data storage disc with an axis of rotation so that the transducer head is adjacent a major disc surface of the disc and so that the transducer head has a limited range of motion that includes innermost and outermost transducer head positions relative to the axis of rotation.

13. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ includes comprises steps of:

- ~~(b1)~~ increasing a voice coil motor (VCM) current magnitude through a voice coil of the actuator substantially linearly to a maximum value;
- ~~(b2)~~ decreasing the VCM current magnitude substantially linearly to about zero; and
- ~~(b3)~~ computing the digital indication in relation to ~~partly based on several~~ voltage measurements taken across the voice coil before completing the decreasing step ~~(b2)~~.

14. (Currently amended) The method of claim 13, further comprising a step of taking at least some of the ~~several~~ voltage measurements after the increasing step ~~(b1)~~ but before the decreasing step ~~(b2)~~.

Claim 15 (Cancelled).

16. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ includes comprises a step ~~(b1)~~ of computing the digital indication partly based on a back electromotive force measured across a voice coil.

17. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ includes a step ~~(b1)~~ of seeking toward a first end-most position of the transducer head.

18. (Currently amended) The method of claim 17 in which the generating step ~~(b)~~ further includes a step ~~(b2)~~ of estimating a resistance ~~partly based on several~~ in relation to measurements taken during the seeking step ~~(b1)~~.

19. (Currently amended) The method of claim 11, further comprising a prior step of parking the transducer head on the data storage disc.

20. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ includes a step ~~(b1)~~ of indicating whether the detected motion pattern met a predetermined motion pattern criterion.

21. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ includes a step ~~(b1)~~ of indicating whether the head was parked normally just before the spinning up step ~~spin up step (a)~~.

22. (Currently amended) The method of claim 11 in which the generating step ~~(b)~~ ~~consists of~~ comprises steps of:

~~(b1)~~ generating a scalar measure of how far the transducer head was from a reference position; and

~~(b2)~~ generating the digital indication as a Boolean value indicating whether the scalar measure exceeds a predetermined threshold.

Claim 23 (Cancelled).

24. (Currently amended) The method of claim 11 further comprising a step © of deciding whether to search for a failure mechanism on a surface of the disc based on the digital indication.

Claims 25-29 (Cancelled).

30. (New) The device of claim 1 in which the current profile comprises a first portion wherein the applied current is sequentially increased from a first value to a maximum value and a second subsequent portion wherein the applied current is sequentially decreased from the maximum value to the first value.

31. (New) The device of claim 1 in which the current profile comprises a first portion wherein the applied current substantially maintains a first steady state magnitude and a second subsequent portion wherein the applied current substantially maintains a second steady state magnitude greater than the first steady state magnitude.

32. (New) The method of claim 11 in which the drive current profile of the applying step comprises a first portion wherein the applied current is sequentially increased from a first value to a maximum value and a second subsequent portion wherein the applied current is sequentially decreased from the maximum value to the first value.

33. (New) The method of claim 11 in which the drive current profile of the applying step comprises a first portion wherein the applied current substantially maintains a first steady state

magnitude and a second subsequent portion wherein the applied current substantially maintains a second steady state magnitude greater than the first steady state magnitude.

34. (New) An apparatus comprising an actuator supporting a transducer, and a position detector configured to determine a former position of the transducer in relation to a latter motion pattern of the actuator, wherein the actuator comprises a voice coil, and wherein the position detector comprises an analog-to-digital converter operatively coupled across the voice coil.

35. (New) The apparatus of claim 34, wherein the voice coil is configured to provide a voltage to the position detector that includes a back-electromotive force component indicative of a movement of the voice coil across a magnetic field.

36. (New) The device of claim 34 in which the position detector comprises a programmable processor configured to spin-up a disc, detect the latter motion pattern after said spin-up, and generate a digital indication of a position of the transducer prior to said spin-up in relation to said latter motion pattern.